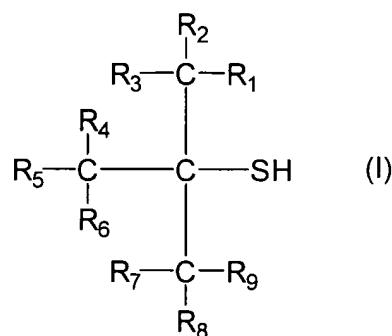


CLAIMS

1. Process for combating the corrosion by naphthenic acids of the  
 5 metal walls of a refining plant in which a hydrocarbon stream is treated in the absence of oxygen, characterized in that it comprises the addition to the said stream of an effective amount of one or more hydrocarbon compound(s) comprising from 4 to 20 carbon atoms of formula:



in which the symbols  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$  and  $R_9$ , which are  
 10 identical or different, each represent a hydrogen atom or a linear or branched alkyl radical, an aryl radical or an alkylaryl radical, it being possible for these radicals optionally to comprise one or more heteroatoms, such as oxygen or sulphur.

15 2. Process according to Claim 1, characterized in that use is made, as compound of formula (I), of a tertiary mercaptan of empirical formula  $C_nH_{2n+1}-SH$  in which  $n$  is between 8 and 14.

20 3. Process according to either of Claims 1 and 2, characterized in that use is made, as compound of formula (I), of tert-dodecyl mercaptan.

25 4. Process according to one of Claims 1 to 3, characterized in that the amount of compound of formula (I) corresponds to a concentration, expressed as equivalent weight of sulphur with respect to the weight of the hydrocarbon stream, of between 1 and 1000 ppm, preferably between 5 and 200 ppm.

5           **5.** Process according to one of Claims 1 to 4, characterized in that the hydrocarbon stream to be treated has a TAN of greater than 0.2 and preferably of greater than 2.

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6. Process according to one of Claims 1 to 5, characterized in that it is implemented at a temperature of between 200 and 450°C and more particularly between 250 and 350°C.

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7. Process according to one of Claims 1 to 6, characterized in that the metal employed in the manufacture of the walls of the refining plant is a carbon steel optionally comprising up to 10% by weight of chromium and/or molybdenum, preferably up to 5%.

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8. Process according to one of Claims 1 to 7, characterized in that the hydrocarbon stream to be treated is chosen from crude oil, atmospheric distillation residue, the gas oil fractions resulting from atmospheric and vacuum distillations, and the corresponding vacuum residue and distillate.